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A method of controlling call admission in a communications network, comprising:

calculating a load level as a function of at least one of a change in 3 4 power measurements or a change in number of users values; and

controlling call admission based on the calculated load level.

- The method of claim 1, wherein said calculating step utilizes a first load level estimating method to calculate an initial load level, and utilizes at least a second load level estimating method to recursively calculate
- 4 updated load levels.
- The method of claim 1, wherein said calculating step estimates load 1 3.
- 2 level as a function of a change in power measurements and a change in
- 3 number of users values.
- 1 The method of claim 3, wherein said calculating step estimates load
- 2 level, L_{new} , by solving:

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$$L_{new}(N_{new}, P_{new}) = \frac{N_{new} x (P_{new} - P_{old})}{N_{new} x (P_{new} - P_{old}) + P_{old} x (N_{new} - N_{old})},$$

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- where N_{new} and N_{old} are current and previous number of users values 5
- 6 respectively, and P_{new} and P_{old} are current and previous power
- measurements respectively. 7

The method of claim 1, wherein said calculating step recursively updates load level as a function of a change in number of users values.

- 1 6. The method of claim 1, wherein said calculating step recursively
- 2 /updates load level as a function of a change in power measurements.
- 1 7. The method of claim 5, wherein said calculating step estimates load
- 2 level, L_{new} , by solving:

$$L_{new} = L_{old} x \frac{N_{new}}{N_{old}},$$

- 4 where L_{old} is a previously calculated load level, and N_{new} and N_{old} are
- 5 current and previous number of users values respectively.
- 1 8. The method of claim 6, wherein said calculating step estimates load
- 2 level, L_{new} , by solving:
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- $L_{new} = 1 \frac{P_{old}}{P_{new}} x \left(1 L_{old} \right),$
- 5 where L_{old} is a previously calculated load level, and P_{new} and P_{old} are
- 6 current and previous power measurements respectively.
- The method of claim 1, further comprising:
 - 2 verifying a calculated load level before using the calculated load
 - 3 level in said controlling step.
 - 1 10. The method of claim 9, wherein said verifying step calculates ar
 - 2 estimated power measurement, P_{new} , based on the calculated load level,
 - 3 L_{new} , by solving:
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 - $P_{new} = \frac{P_{old}(1 L_{old})}{(1 L_{new})},$
 - 6 where P_{old} is a previous power measurement and L_{old} is a previously
 - 7 calculated load level, said verifying step comparing P_{new} with an actual

- 8 power measurement, P_{new} , to determine whether L_{new} is reasonably
- 9 accurate.
- 1 11. The method of claim 10, wherein, when said verifying step indicates
- 2 that the P_{new} is not sufficiently close to P_{new} , said calculating step
- 3 calculates load level by solving:

$$L_{new} = 1 - \frac{P_{old}}{P_{new}} x (1 - L_{old}).$$

- 1 12. A system of controlling call admissions in a communications
- 2 network, comprising:
- 3 load calculating means for calculating a load level as a function of
- 4 at least one of a change in power measurements (or) a change in number of
- 5 users values; and
- 6 control means for controlling call admission based on the calculated
- 7 load level.

- 10 3. The system of claim 12, wherein said load calculating means
- 2 utilizes a first load level estimating technique to calculate an initial load
- 3 level, and utilizes at least a second load level estimating technique to
- 4 recursively calculate updated load levels.
- 1 14. The system of claim 12, wherein said load calculating means
- 2 estimates load level as a function of a change in power measurements and
- 3 a change in number of users values.
- 1 15. The system of claim 14, wherein said load calculating means
- 2 estimates load level, L_{new} , by solving:

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$$L_{new}(N_{new}, P_{new}) = \frac{N_{new} x (P_{new} - P_{old})}{N_{new} x (P_{new} - P_{old}) + P_{old} x (N_{new} - N_{old})},$$



- 5 where N_{new} and N_{old} are current and previous number of users values
- 6 respectively, and P_{new} and P_{old} are current and previous power
- 7 measurements respectively.
- 54 6 2 16. The system of claim 12, wherein said load calculating means
 - 2 recursively updates load level as a function of a change in number of
 - 3 users values.
 - 1 17. The system of claim 12, wherein said load calculating means
 - 2 recursively updates load level as a function of a change in power
 - 3 measurements.
 - 1 18. The system of claim 16, wherein said load calculating means
 - 2 estimates load level, L_{new} , by solving:

$$L_{new} = L_{old} x \frac{N_{new}}{N_{old}},$$

- 5 where L_{old} is a previously calculated load level, and N_{new} and N_{old} are
- 6 current and previous number of users values respectively.
- 1 19. The system of claim 17, wherein said load calculating means
- 2 estimates load level, *L_{new}*, by solving:

$$L_{new} = 1 - \frac{P_{old}}{P_{new}} x \left(1 - L_{old}\right),$$

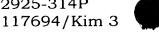
- 5 where L_{old} is a previously calculated load level, and P_{new} and P_{old} are
- 6 current and previous received power measurements respectively.

The system of claim 12, further comprising:

verifying means for verifying a calculated load level before said

3 control means uses the calculated load level.

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- The system of claim 20, wherein said verifying means calculates and 1 21.
- 2 estimated power measurement, $P_{new'}$, based on the calculated load level,
- 3 L_{new} , by solving:

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$$P_{new} = \frac{P_{old} (1 - L_{old})}{(1 - L_{new})},$$

- 6 where P_{old} is a previous power measurement and L_{old} is a previously
- 7 calculated load level, said verifying means comparing P_{new} , with an actual
- power measurement P_{new} to determine whether L_{new} is reasonably 8
- 9 accurate.

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- 22. The system of claim 21, wherein, when said verifying means 1
- indicates that the P_{new} is not sufficiently close to P_{new} , said calculating 2
- means calculates load level by solving:

$$L_{new} = 1 - \frac{P_{old}}{P_{new}} x \left(1 - L_{old}\right).$$

- The system of claim 12, further comprising: 1 23.
- 2 input means for receiving power measurements and number of user